VHB

TRANSPORTATION . LAND DEVELOPMENT . ENVIRONMENTAL SERVICES

Interstate 95 Corridor Needs Analysis

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Background

- Initiated in 2007
- Study Objectives
  - Examine weekday *and* peak holiday weekend traffic flows (Labor Day)
  - Analyze existing, 2015 and 2035 baseline conditions
  - Recommend low-to-medium cost improvement alternatives

Primary Deficiencies

- Capacity constraints on mainline “drive” operational problems
- Weekday problem areas (2035)
  - AM – LOS F north of Route 3
  - PM – LOS E/F south to Route 3
- Holiday problem areas (2035)
  - LOS E/F between Route 1 & Route 17

Ramp Metering

- Benefits
  - Increase mainline throughput 8% – 22%
  - Reduce crashes in merge zones 15% – 50%
- Negative impacts
  - “Equity”/Public opposition
  - Ramp delay/queue spillback
- $50,000 per installation

Limited Shoulder Use (as travel lane)

- Benefits
  - Increases peak period mainline capacity by 33%
  - Improves merge/diverge LOS
- Negative impacts
  - Safety - driver expectancy & lack of emergency “pull-off” lane
- $0.5 - $1.5 million per mile (assumes shoulders are currently structurally suitable)

Variable Speed Limits

- Dynamic message signs used to “smooth” speeds through corridor
- Benefits
  - Decreased travel times by 8%
- Negative impacts
  - Requires diligent enforcement
- $ 400,000 per mile (approx. $14 million for entire corridor)

“Minor” Geometric Improvements

- Additional lanes on ramps
- Lengthening acceleration or deceleration lanes
- Benefits
  - Improved LOS
  - Prevents queue spillback onto mainline
- Variable costs

Travel Demand Management & Provision of Alternative Route Choices

- Transit, HOV and Park & Ride Lots
- Upgrades to parallel roadways
- Provision of additional interchanges
- Provision of new roadways
- Provision of local roadway connections between major arteials